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09/677,637	10/03/2000	Daniel A. Japuntich	48317USASL-031	7360

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EXAMINER

LEWIS, AARON J

ART UNIT

PAPER NUMBER

3761

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ATTORNEY	[Signature]
DOCKETED BY	[Signature]

JUN 25 2002

REFERRED TO \_\_\_\_\_

Please find below and/or attached an Office communication concerning this application or proceeding.

DUE DATE (S)	_____
ATTORNEY	_____
DOCKETED BY	_____

# Office Action Summary

Application No.  
09/677,637

Applicant(s)  
DANIEL A. JAPUNTICH ET AL.

Examiner  
AARON J. LEWIS

Art Unit  
3761



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Apr 2, 2002
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 33-54 and 56-58 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 33-54 and 56-58 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

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## **DETAILED ACTION**

### ***Claim Objections***

1. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 67 and 68 been renumbered 57 and 58, respectively.

### ***Double Patenting***

2. Claims 33-54,56-58 of this application continue to conflict with claims 34-77 of Application No. 08/240,877; 34-77 of 09/440,619; 33-65 of 09/678,580; 33-62 of 09/678,579; 33-54,56-61 of 09/678,488; 33-36,38-62,64-66 of 09/677,636. 37 CFR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application. Applicant is required to either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP § 822.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 33-54,56-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simpson et al.('516) in view of McKim ('618), Braun ('362) and Warbasse ('706).

The differences between Simpson et al. and claim 33 are the cross members being slightly recessed beneath the seal surface, the one free portion of the flexible flap having a profile that comprises a curve when viewed from the front, which curve is cut to correspond to the general shape of the seal surface located therebehind; and a valve cover that comprises a fluid impermeable ceiling that increases in height in the direction of the flexible flap from the first end to the second end and having cross members that are disposed within the opening of the valve cover.

Warbasse teaches a valve cover (11) having a fluid impermeable ceiling that increases in height in the direction of the flexible flap from the first end to the second end for the purposes of protecting the valve flap (12), controlling the extent of movement of the valve flap, controlling the direction of fluid flow exiting the mask via the valve.

It would have been obvious to modify the valve (fig.2) of Simpson et al. to provide a valve cover because it would have provided a means for protecting the valve flap (12), controlling the extent of movement of the valve flap, controlling the direction of fluid flow exiting the mask via the valve as taught by Warbasse.

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McKim ('618) teaches a flexible flap having a fixed portion (14a) and a free portion (opposite the fixed portion as illustrated in figs. 1 and 3), the one free portion of the flexible flap having a profile that comprises a curve when viewed from the front, which curve is cut to correspond to the general shape of the seal surface. McKim teaches a curved seal surface and curved flexible flap for the purpose of seating quickly, effectively and without float or bounce after each opening (col.1, lines 64-72).

It would have been obvious to modify the flexible flap and seat of Simpson et al.(fig.2) to be curved because it would have provided quick seating, in an effective manner and without float or bounce after each opening as taught by McKim.

Braun, in an exhalation valve for a filtering face mask, teaches cross members (19,20) which are slightly recessed beneath the seal surface (18) for the purpose of increasing the sealing force (col.4, lines 36-41) and cross members (25) that are disposed within the opening of the valve cover for the purpose of protecting the valve against debris (col.4, lines 25-26).

It would have been obvious to modify the cross members of Simpson et al. (structure through which openings 16 extend) to recess them slightly beneath the seal surface because it would have provided a increased sealing force as taught by Braun.

As to claim 34, the particular material from which the valve seat of Simpson et al. is made and the manner of making the valve seat can be arrived at through mere routine obvious experimentation and observation with no criticality seen in any particular method of manufacture. It is noted that Simpson et al. (page 2, line 39) discloses the valve flap being made from a plastic

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material. It is submitted that it would have been obvious to make a plastic valve seat by any well known method of manufacture including injection molding inasmuch as injection molding is a typical method employed in the manufacture of plastic articles.

As to claim 35, the flexible flap of Simpson et al. as modified by McKim would normally assume a flat configuration when not positioned on the valve seat with no forces being applied to it (McKim col. 1, lines 64-72) but has a curved profile when viewed from a side elevation (fig. 5 of McKim) at rest on the seal surface.

As to claim 36, the flexible flap (15) of Simpson et al. is disclosed as being made of flexible plastic and as such is fully capable of performing the recited function of resisting permanent set and creep.

As to claims 37 and 40, the flexible flaps (15, 18) of Simpson et al. are disclosed as being made of plastic and/or rubber for example (page 2, line 39 and line 53). It would have been obvious to make the flexible flap from any well known flexible material including and elastomeric rubber such as a polyisoprene as mere substitution of one well known flexible material for another and because elastomeric rubber is a well known material from which to make valve flaps.

As to claims 38 and 39, the degree of a seal between the valve flap and valve sealing surface of Simpson et al. can be arrived at through mere routine obvious experimentation and observation with no criticality seen in any particular degree of seal including one meeting the standards as set forth in 30 C.F.R. 11.183-2, July 01, 1991. Further, it stands to reason that one of ordinary skill in the art would strive to make the face mask in accordance with at least minimum current

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government standards of operation including one having a valve flap having a stress relaxation sufficient to keep the flexible flap in an abutting relationship to the seal surface under any static orientation for 24 hrs. at 70 degrees centigrade.

As to claims 41-44, the particular dimensions, the particular material including the hardness of the material of the flexible flap (15,14) of Simpson et al. can be arrived at through mere obvious experimentation and observation with no criticality seen in any particular dimensions nor in any particular constituency.

As to claim 45, the flange against which the valve flap is secured in Simpson et al. (fig.2) is illustrated as being the same 360 degrees around the valve seat.

As to claims 46-48, while Simpson et al. do not address the particular volume of a wearer's exhalation exiting the exhalation valve (12), it is submitted that since the exhalation valve (12) is expressly disclosed as opening in response to a wearer's exhalation, it would have been obvious that the valve would remain opened as long as a wearer is exhaling which would enable most if not all of the volume including 60-70% of gas exhaled by a wearer to pass through valve (12) of Simpson et al..

As to claim 49, McKim (fig.5) illustrates the flexible flap exhibiting a curvature when resting on the seal surface and viewed in cross-section from the side..

As to claim 50, the flexible flap of Simpson et al. as modified by McKim is held in position on the valve seat by mechanical clamping (see fig.3 of McKim).

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As to claim 51, the shape of the orifice (16) of Simpson et al. does not wholly correspond to the shape of the seal surface inasmuch as the seal surface surrounds the orifice.

As to claim 52, Warbasse teaches a valve cover (#11 of fig.2) having an opening in the valve cover which is approximately parallel to the path traced by the second end of the flexible flap during its opening and closing.

As to claim 53, Simpson et al. as further modified by Warbasse teach a cover which directs exhaled downwards when the mask is worn by a person.

As to claim 54, the cover (11 of fig.3) of Warbasse shows fluid impermeable sidewalls.

As to claim 56, the opening in the cover of Simpson et al. as modified by Warbasse is at least the size of the orifice in the valve seat as illustrated in figs.3 and 4 of Simpson et al..

Claim 57 is substantially equivalent in scope to claim 33 and is included in Simpson et al. as modified by Warbasse, Braun and McKim for the reasons set forth above with respect to claim 33.

As to claim 58, the single flexible flap of Simpson et al. has only one free portion, that is, the portion of the flap which is unattached to the valve seat and rim.

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Copies of all prior art references listed on the accompanying PTO-892 have been provided with the Office action in copending application 09/678,580.



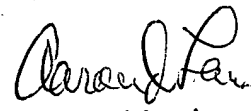
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*Response to Arguments*

6. Applicant's arguments with respect to claims 33-54,56-58 have been considered but are moot in view of the new ground(s) of rejection.
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron J. Lewis whose telephone number is (703) 308-0716.

Aaron J. Lewis

June 15, 2002

  
Aaron J. Lewis  
Primary Examiner